

REMARKS

Upon entry of the present amendment claims 1-9 and 12-27 are pending in the application. Claims 1-9 and 12 have been amended in accordance with the requirements of U.S. patent practice. Claims 10 and 11 are canceled without prejudice. New claims 13-27 add no new matter, as these claims contain subject matter deleted from the amended claims. Applicants respectfully request entry of the preliminary amendment.

Respectfully Submitted,



Anne Gerry Sabourin
Registration No. 33,772
Customer No. 26922

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BASF Corporation
26701 Telegraph Road
Southfield, Michigan 48034-2442
(248)-948-2020

Version with Markings to Show Changes Made

1. (Amended) A multicoat system comprising
 - (I) at least one coating layer [constituent](IA) which [consists of or] comprises mesomorphic polyelectrolyte complexes selected from 1.1.1 and 1.1.2 and which [can be] are prepared by
 - I.1) reacting, in a liquid phase (IB),
 - I. 1. 1) at least one polyelectrolyte selected from the group consisting of polymeric and[/or] oligomeric, organic, anionic polyelectrolytes (IC) with at least one compound selected from the group consisting of polymeric and[/or] oligomeric, organic, cationic polyelectrolytes (ID) and[/or at least one] cationic surfactants(IE) [or] and
 - I. 1. 2) at least one polyelectrolyte selected from the group consisting of polymeric and[/or] oligomeric, organic, cationic polyelectrolytes (ID) with at least one anionic surfactant (IF)
 - in a stoichiometric or non-stoichiometric ratio, to form liquid phase (1G).
 - I. 2) pouring the resulting liquid phase (IG) onto a substrate or into a mold and
 - I.3) allowing it to solidify, and
 - I.4) heat-treating the resulting solid (IH); and
- (II) at least one [coat (IIA) which is] three-dimensionally crosslinked coating layer (IIA) [and can be] formed by
 - (II.1) applying to coating layer (1A) [prepared by] [II.1) applying] at least one aqueous, thermally curable coating material (IIB) comprising
 - II.1.1) at least one binder (IIC) and
 - II.1.2) at least one crosslinking agent (IID),
 - [to the surface of the constituent (IA),] and
 - II.2) thermally curing the resulting wet film (IIE).

2. (Amended) A process for producing multicoat systems, [in which] comprising applying at least two coating constituents [are applied] one over the other and [are cured] curing after each application, [which comprises] comprising (I) preparing at least one constituent (IA) [which consists of or comprises] comprising mesomorphic polyelectrolyte complexes selected from 1.1.1 and 1.1.2, prepared by

I.1) reacting, in a liquid phase (IB),

I.1.1) at least one polyelectrolyte selected from the group consisting of polymeric and[/or] oligomeric, organic, anionic polyelectrolytes (IC) with at least one compound selected from polymeric and[/or] oligomeric, organic, cationic polyelectrolytes (ID) and[/or at least one] cationic surfactants (IE)

[or] and

I.1.2) at least one polyelectrolyte selected from the group consisting of polymeric and[/or] oligomeric, organic, cationic polyelectrolytes (ID) with at least one anionic surfactant (IF)

in a stoichiometric or non- stoichiometric ratio, to form a liquid phase (1G),

I.2) pouring the resulting liquid phase (1G) onto a substrate or into a mold, and

I.3) allowing it to solidify, and

I.4) heat-treating the resulting solid (IH); and then, on the resulting constituent (IA),

(II) [preparing] forming at least one coating layer (IIA) which is three-dimensionally crosslinked by

II.1) applying to the surface of the constituent (1A) at least one aqueous, thermally curable coating material (IIB) comprising

II.1.1) at least one binder (IIC) and

II.1.2) at least one crosslinking agent (IID) to form a wet film (IIE),

[to the surface of the constituent (IA),] and

II.2) thermally curing the resulting wet film (IIE).

3. (Amended) A reactive system comprising

(I) at least one constituent (IA) comprising at least one mesomorphic polyelectrolyte complex selected from 1.1.1 and 1.1.2, comprising
1.1.1) at least one polyelectrolyte selected from the group consisting of polymeric and[/or] oligomeric, organic, anionic polyelectrolytes (IC) and at least one compound selected from the group consisting of polymeric and[/or] oligomeric, organic, cationic polyelectrolytes (ID) and[/or at least one] cationic surfactants (IE)

[or] and

1.1.2) at least one polyelectrolyte selected from the group consisting of polymeric and[/or] oligomeric, organic, cationic polyelectrolytes (ID) and at least one anionic surfactant (IF)

and also

(II) at least one aqueous, thermally curable coating material (IIB) comprising
II.1.1) at least one binder (IIC) and

II. 1. 2) at least one crosslinking agent (IID)

4. (Amended) The multicoat system as claimed in claim 1, [the process for producing it as claimed in claim 2, or the reactive system as claimed in claim 3,] wherein the mesomorphic polyelectrolyte complexes produced in liquid phase (B), [and/or their precursors] are purified by repeated precipitation from a solution and redissolution.

5. (Amended) The multicoat system as claimed in claim 1 [or 4, the process for producing it as claimed in claim 2 or 4, or the reactive system as claimed in claim 3 or 4,] wherein polyelectrolytes (IC) and (ID) selected are those whose polymer chains (IC) and (ID), viewed independently, would not be compatible but would instead separate again in the solid phase.

6. (Amended) The multicoat system as claimed in [any of claims 1, 4 and 5 or the process for producing it as claimed in any of claims 2, 4 and 5] claim 1, wherein the solid (IH) is heat-treated for from 1 minute to 10 hours.

7. (Amended) The multicoat system as claimed in [any of claims 1 and 4 to 6 or the process for producing it as claimed in any of claims 2 and 4 to 6,] claim 1, wherein the solid (IH) is heat-treated at temperatures between 80 and 300°C.

8. (Amended) The multicoat system as claimed in [any of claims 1 and 4 to 7, the process for producing it as claimed in any of claims 2 and 4 to 7, or the reactive system as claimed in any of claims 3 to 5 and 7,] claim 1 or the process of claim 2 or the reactive system of claim 3, wherein the constituent (IA), [the coat (IIA) and/or the aqueous, thermally curable coating materials (IIB)] comprises additives (J), [especially] selected from the group consisting of polymers, crosslinkers, crosslinking catalysts, initiators, [especially] photoinitiators, pigments, dyes, fillers, reinforcing fillers, rheological assistants, wetting agents, [and] dispersants, defoamers, adhesion promoters, additives for improving substrate wetting, additives for improving surface smoothness, dulling agents, leveling agents, film-forming auxiliaries, driers, antiskinning agents, light stabilizers, corrosion inhibitors, biocides, flame retardants, polymerization inhibitors, [especially] photoinhibitors, [or] plasticizers and mixtures thereof.

9. (Amended) The multicoat system as claimed in [any of claims 1 and 4 to 8] claim 1, or the process for producing it as claimed in [any of claims 2 and 4 to 8], or the reactive system as claimed in claim 3 [any of claims 3 to 5 and 8], wherein the coat (IIA) [and/or the aqueous, thermally curable coating materials (IIB)] comprise constituents which are curable with actinic light, [especially] including UV radiation, and [or] electron beams.

Please cancel claims 10 and 11 without prejudice.

12. (Amended) An article, [especially an] selected from the group consisting of automobile, coil or furniture, comprising at least one multicoat system as

claimed in [any of claims 1 and 4 to 9 or at least one multicoat system produced with the process as claimed in any of claims 2 and 4 to 9] claim 1.